

AI in Genomics Market By Offering (Hardware, Software, Services), By Technology (Machine Learning, Computer Vision), By Application (Drug Discovery and Development, Precision Medicine, Diagnostics, Others), By End User (Pharmaceutical and Biotech Companies, Healthcare Providers, Research Centers): Global Opportunity Analysis and Industry Forecast, 2021-2031

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Report description:

The global AI in genomics market was valued at \$ 0.34 billion in 2021 and is projected to reach \$9.9 billion by 2031, growing at a CAGR of 40.6% from 2022 to 2031.

Genomics is a branch of molecular biology that focuses on the study of the entire genetic material (DNA) of organisms. It involves the analysis of the structure, function, and evolution of genomes, including the identification of genes, their regulatory elements, and how they interact with each other. The field of genomics has grown rapidly over the last few decades due to advances in technology that have made it possible to sequence and analyze DNA more quickly and accurately. With the advent of high-throughput sequencing technologies, it is now possible to sequence entire genomes at a fraction of the cost and time that used to be required earlier. AI in the genomics market refers to the use of artificial intelligence (AI) technologies to support genomic research and applications. With the vast amount of genomic data being generated, AI tools have become increasingly important for analyzing and interpreting this data.

The driving factors for AI in the genomics market are advancements in AI technologies, growth in demand for personalized medicine, increase in adoption of genomics in research and healthcare, and rise in investment in AI in genomics. Advancements in AI technologies are the result of the development of machine learning, natural language processing, and deep learning has enabled researchers to analyze and interpret genomic data more accurately and efficiently. As AI technologies continue to improve, their application in genomics is expected to become even more widespread. Personalized medicine involves developing treatment plans tailored to individual patients based on their genomic data. As the demand for personalized medicine continues

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to grow, the use of AI tools in genomics is becoming increasingly important for identifying genetic variations that may be relevant to a patient's disease or condition. For instance, according to the 2022 report by National Library for Medicine, rheumatoid arthritis and psoriasis as the inflammatory disease, in addition to Alzheimer's disease are diseases having high unmet needs for personalized medicine from the viewpoints of disease mechanisms, diagnostic biomarkers, therapeutic drugs with diagnostic markers and treatment satisfaction.[]

Furthermore, genomics is becoming an increasingly important tool in both research and healthcare, as it provides important insights into the genetic basis of diseases and other conditions. This is driving the need for more advanced AI tools and technologies to analyze and interpret genomic data.[]However, factors such as high-cost data quality issues and limited availability of skilled professionals are expected to restrain the growth of AI in the genomics market.[]

The AI in the genomics market is segmented into offering, technology, application, end-user, and region. Based on offering, the market is segmented into software, services and hardware. By technology, the market is segmented into machine learning and computer vision. By application, the market is segmented into drug discovery & development, precision medicine, diagnostics, and others. By end user, the market is segmented into pharmaceutical and biotech companies, healthcare providers, research centers, and others. Region-wise, the market is analyzed across North America (the U.S., Canada, and Mexico), Europe (Germany, France, the UK, Italy, Spain, and the rest of Europe), Asia-Pacific (Japan, China, Australia, India, South Korea, and rest of Asia-Pacific), and LAMEA (Brazil, South Africa, Saudi Arabia, and rest of LAMEA).[]

Major key players that operate in the AI in genomics market are Microsoft, IBM, NVIDIA Corporation, Deep Genomics, DATA4CURE, INC, Freenome holdings, Inc, Thermo fisher scientific, Illumina, Inc., Sophia Genetics, and BenevolentAI.

Key Benefits For Stakeholders

This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the ai in genomics market analysis from 2021 to 2031 to identify the prevailing ai in genomics market opportunities.

Market research is offered along with information related to key drivers, restraints, and opportunities.

Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.

An in-depth analysis of the ai in genomics market segmentation assists to determine the prevailing market opportunities.

Major countries in each region are mapped according to their revenue contribution to the global market.

Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.

The report includes analysis of the regional as well as global ai in genomics market trends, key players, market segments, application areas, and market growth strategies.

Key Market Segments

By Technology

- Machine Learning
- Computer Vision

By Offering

- Hardware
- Software
- Services

By Application

- Drug Discovery and Development
- Precision Medicine
- Diagnostics
- Others

By End User

- Pharmaceutical and Biotech Companies
- Healthcare Providers
- Research Centers

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By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- Germany
- France
- UK
- Italy
- Spain
- Rest of Europe
- Asia-Pacific
- Japan
- China
- Australia
- India
- South Korea
- Rest of Asia-Pacific
- LAMEA
- Brazil
- Saudi Arabia
- South Africa
- Rest of LAMEA
- Key Market Players
- IBM Corporation
- Deep Genomics
- Thermo Fisher Scientific Inc.
- Illumina, Inc.
- Data4Cure, Inc
- BenevolentAI
- Microsoft Corporation
- NVIDIA Corporation (Mellanox Technologies)
- Sophia Genetics
- Freenome Holdings, Inc

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